

Impact of Mental Disorders on RE Soldiers: WRAIR Psychiatric Research



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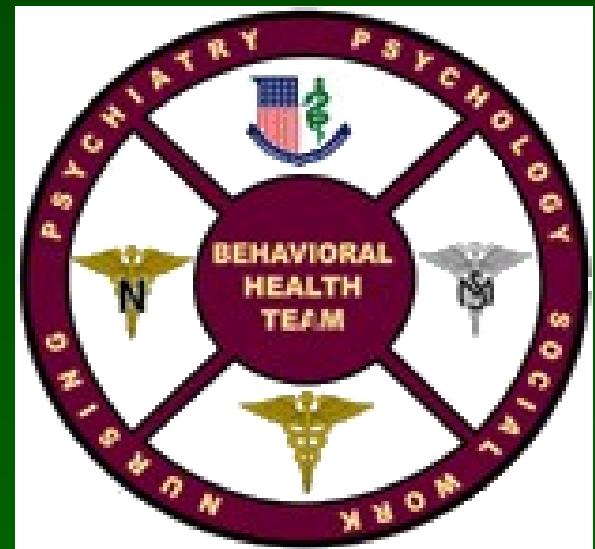
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Overview

- MJ and Attrition
- Epidemiological Insights
 - US Teens & Military Recruits
 - ACE Study & Implications
- Neuroscience Insights
- Intervention Options
- Research Goals



Mental Disorders: A Significant Threat to Readiness

- 2nd leading cause of **soldier hospitalizations** (15%)
(exceeded only by OB deliveries)
- **Leading cause of inpatient bed days** (30%)
- 5th leading cause of **ambulatory care visits**
- **Leading cause of hospital-related lost duty days**
- 10% of AD population **treated annually** for MH problems
- **Leading cause of premature attrition** from military



Mental Health Care Use and Attrition

Cumulative Percent of AD Who Left Military Service Within Specified Time After First Ambulatory Visit, 1997

	Mental Disorders (n=65,562)	15 Other ICD Illness Categories (n=857,490)
6 Months	27%	9% (range 6-19%)
1 Year	40%	18% (range 14-27%)

p<0.0001 both comparisons, independent of age, gender, duration of service

Reasons for Separation Following MH Hospitalization (Within Two Years)

Reasons for Separation (SPD Codes)	Mental Disorders (n=1174) No. (%)	All Other Diagnoses (n=3421) No. (%)
Completion of enlistment/ retirement	152 (13%)	1562 (46%)
Misconduct/ court martial/ in lieu of trial	300 (26%)	229 (7%)
Personality disorder	194 (17%)	24 (1%)
Medical disability / severance	145 (12%)	531 (16%)
EPTS medical condition	133 (11%)	46 (1%)
Entry level/ unsatisfactory performance	81 (7%)	64 (2%)
Alcohol/ drug rehab failure	56 (5%)	10 (<1%)
AWOL	32 (3%)	48 (1%)
Weight control failure/ physical	27 (2%)	81 (2%)
Pregnancy	23 (2%)	634 (19%)

Initial Costs...

ONE SOLDIER COSTS:

- \$15,500 to recruit
- \$13,000 for BCT
- \$19,000 for AIT

TOTAL COST per Soldier: \$47,500

- 1/3 fail to complete their 3-year enlistment
- We lose 13.8% (8237) each year in IET alone

TOTAL ARMY LOSS > 400M per year

(One GAO figure put the DOD loss at \$1.2 billion per year)

Early Attrition Data

- Attrition within the first 6 months on active duty are fairly similar
 - 11.9%, 15.5%, 16%, 16.1% accounting for approximately 3650, 6075, 5013, 8237 recruits for the Air Force, Navy, Marines, Army respectively
- Mental health problems for all services are major reasons for hospitalization in the first 6 months
 - 21%, 26%, 49%, 54% of all hospitalizations in the first 6 months are for psychiatric conditions in the Marines, Army, Air Force, Navy respectively

IET Attrition and MH

Category	Total	% of Total
50% of EPTS	1972	18%
Failure to Adapt	3208	29%
Lack of Motivation	800	7%
Good of Svc	764	7%
Misconduct	331	3%
TOTAL	7075/10926	65%

Source: ATRRS ME September 2002 Data

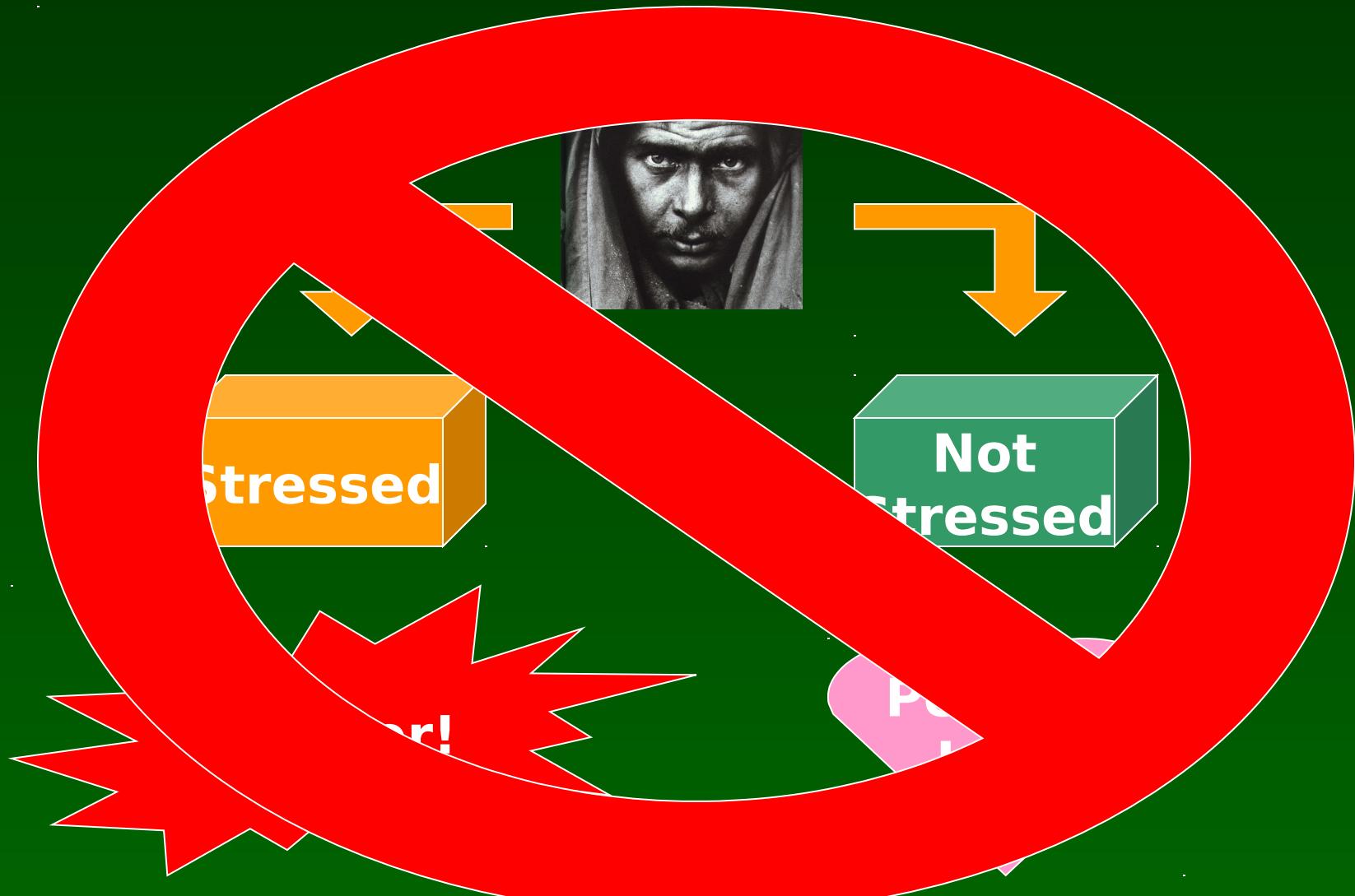
Bottom line:

Helping 5% would save \$18,700,000

Recruit to Fail...



Old Stress Model



Consider our “Inputs”

- Our current cohorts of DoD recruits arrive at IET with significant developmental “baggage”
 - approx. 40% self-report having been raised in homes where they were physically &/or sexually abused &/or neglected*
 - > 40% come from ‘non-traditional’ homes without 2 consistent parenting figures**
 - > 20% of HS students had seriously considered attempting suicide during a 12 month period***
 - 8% of HS students reported making a suicide attempt in the preceding 12 month period****

* data from Naval Health Research Center-Report #95-26: Pre-enlistment Maltreatment Histories of US Navy Basic Trainees: Prevalence of Abusive Behavior”

** data from Zill & Robinson, “The Generation X”, *American Demographics*, April 1995, pp. 24-33

*** data from Centers for Disease Control(CDC) Youth Risk Behavior Surveillance 2000

****data from National Strategy for Suicide Prevention, US Public Health Surgeon General, May 2001

The ACE Study

- The largest study of its kind ever done to examine the health and social effects of adverse childhood experiences throughout the lifespan



- **Summary of Findings:**

- Adverse Childhood Experiences (ACE's) are very common
- ACEs are strong predictors of health risk behaviors in adolescence and adult life (ie. substance abuse, etc.)

“ACE” Study Population Data

Adverse Childhood Experiences (ACEs) are Common in the Population

<u>Household Exposures:</u>	<u>Childhood Abuse:</u>
Alcohol abuse	23.5% Psychological
Mental illness	18.8% Physical
Battered mother	12.5% Physical
Drug abuse	4.9% Sexual
Criminal behavior	3.4%

***Percent reporting types of ACEs**

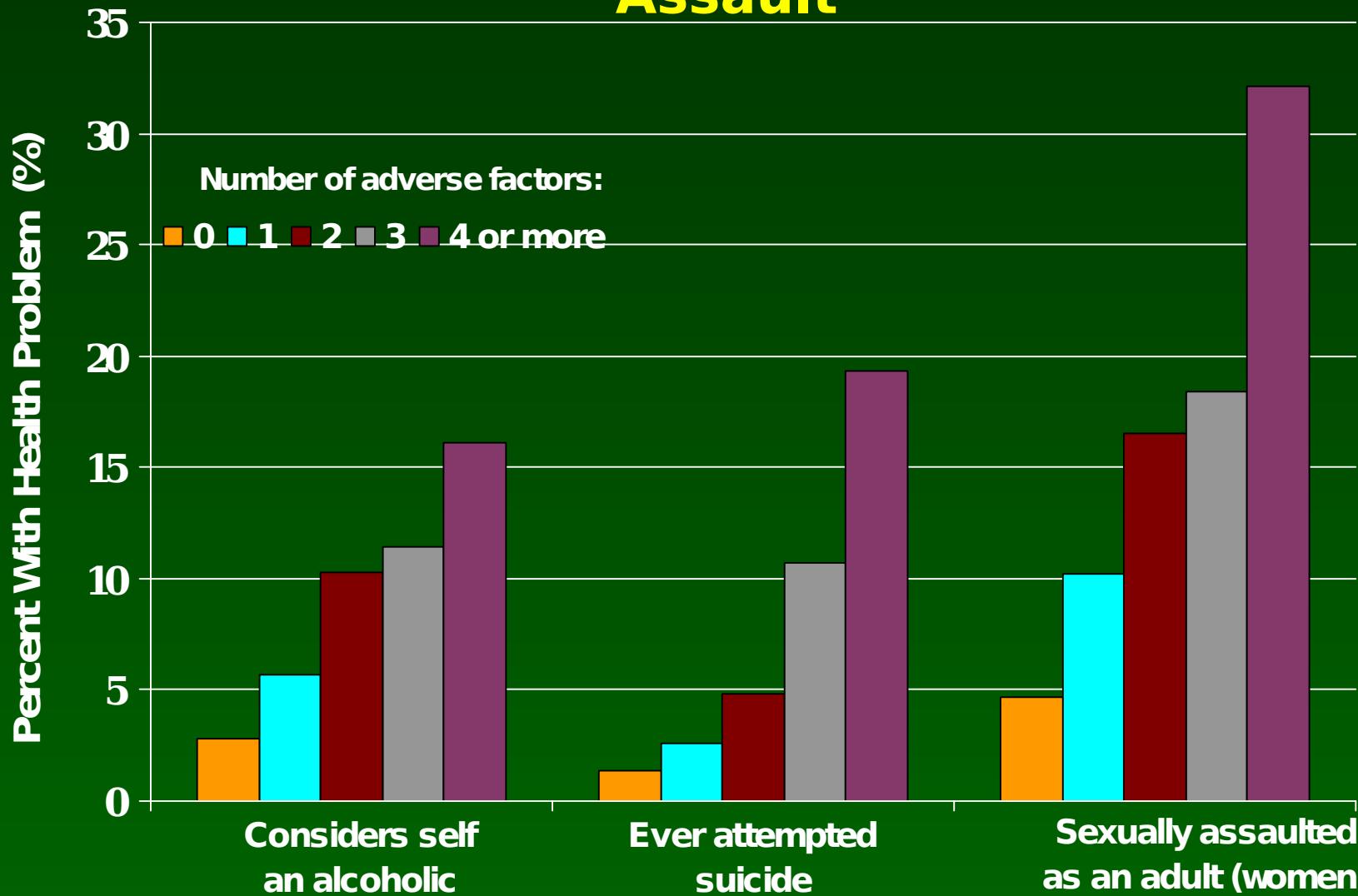
“ACE” Study Population Data

ACE SCORE	PREVALENCE
0	47.9%
1	24.9%
2	13.1%
3	7.3%
4 or More	6.8%

- *More than half had at least one ACE*
- *More than one in four had 2 or*

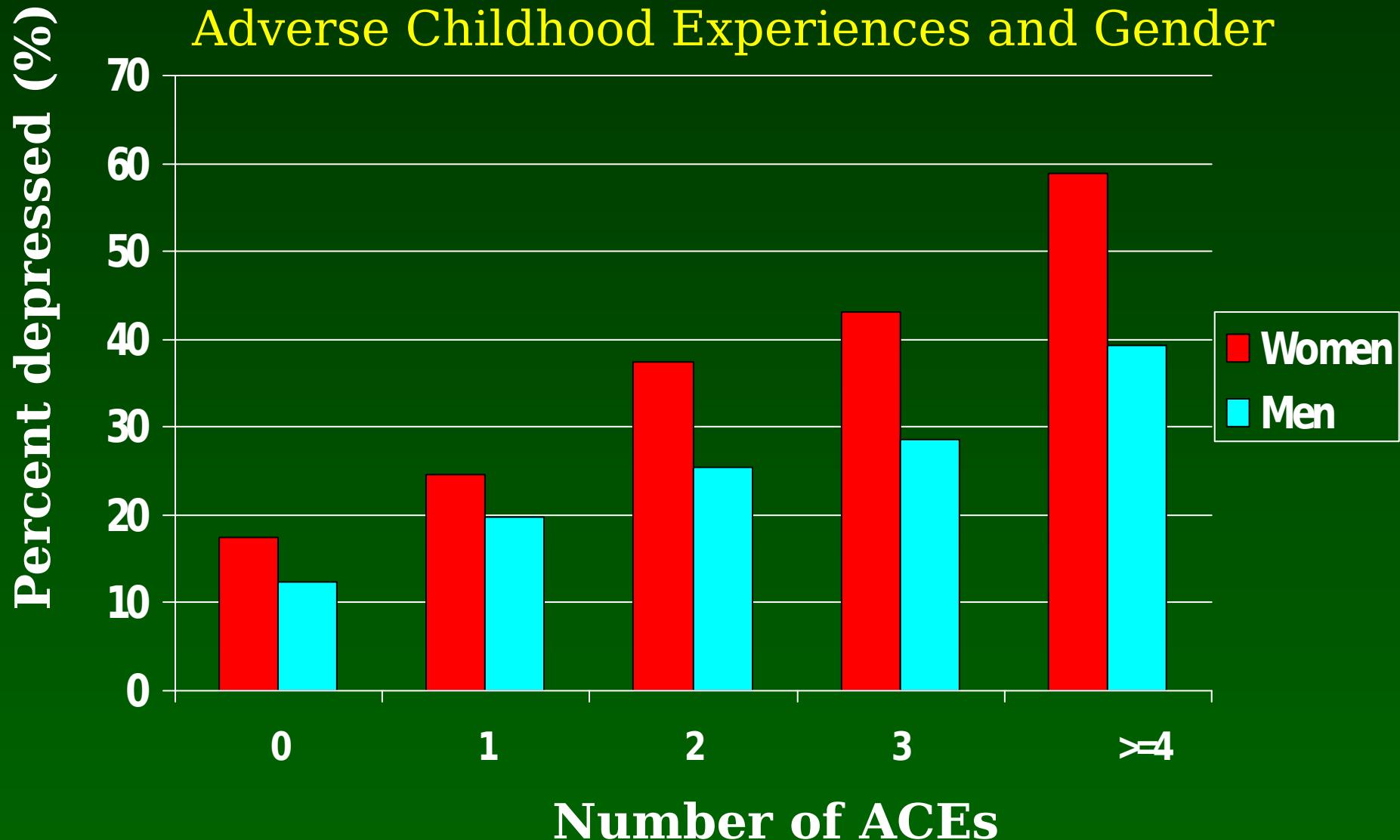
ACE Study Population

ACE Data and Alcoholism, Suicide Attempts, or Sexual Assault



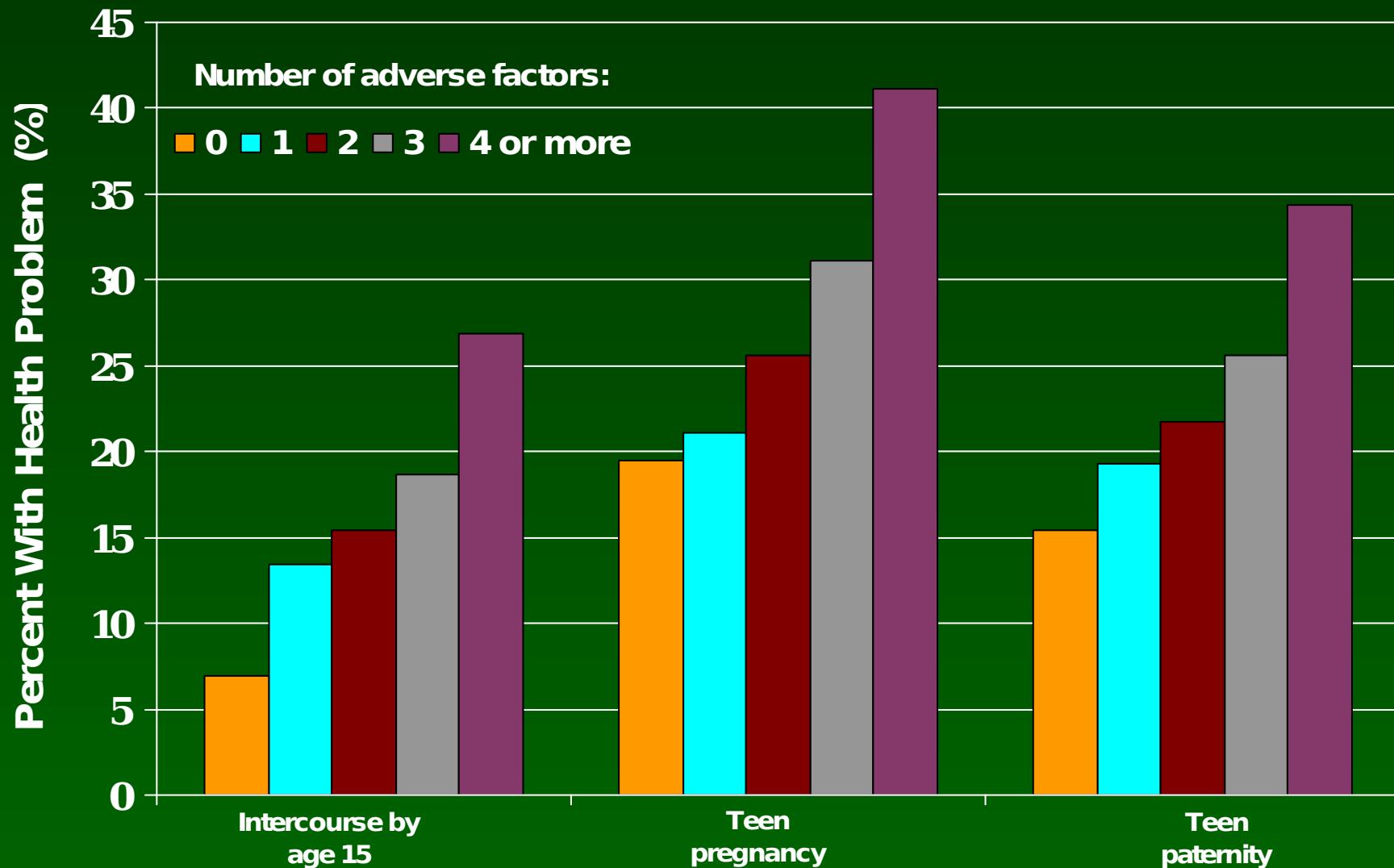
ACE Study Population Data

Lifetime History of Depression by Number of Adverse Childhood Experiences and Gender



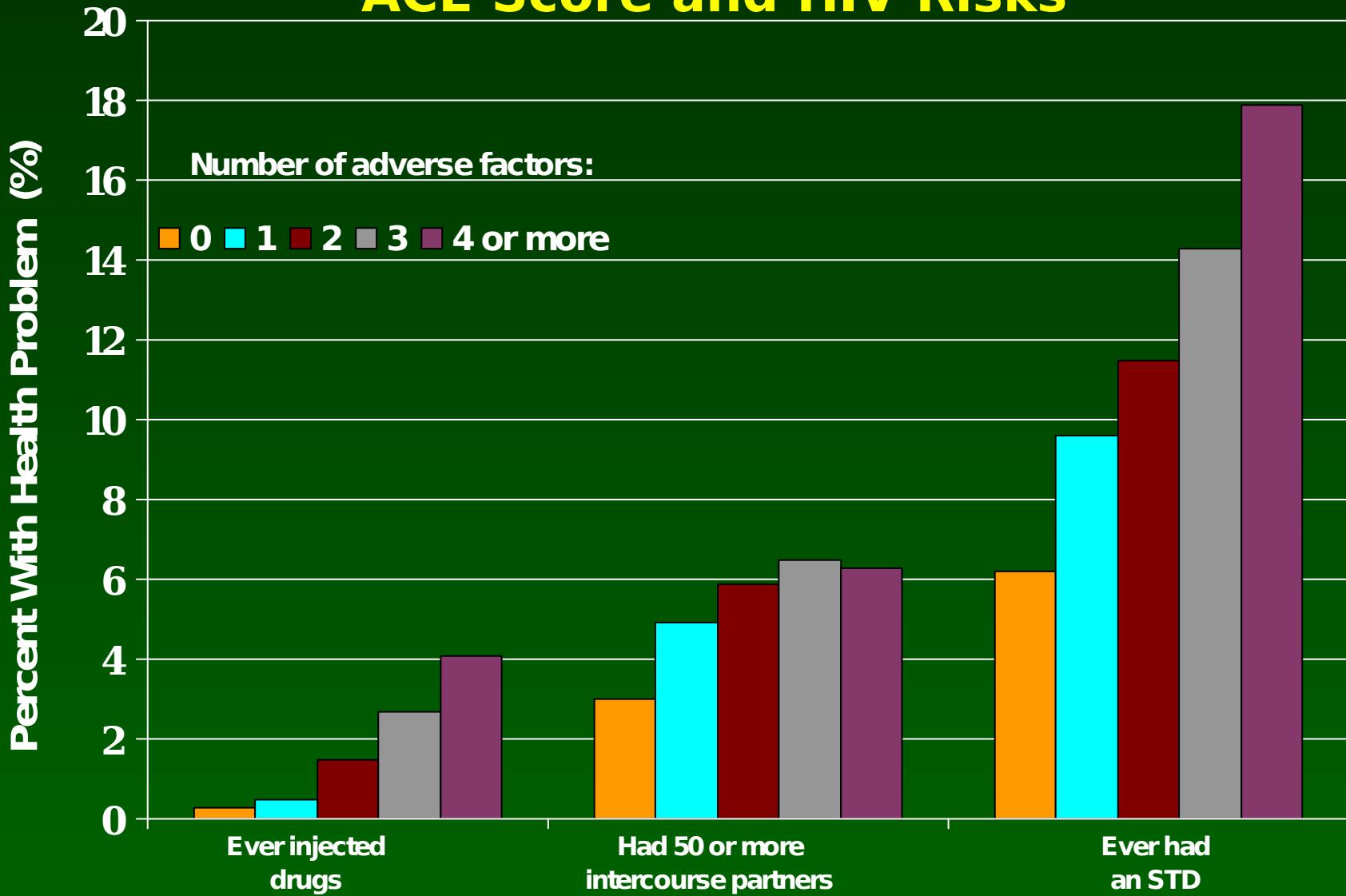
“ACE” Study Population Data

Number of Adverse Childhood Experiences and Teen Sexual Behaviors



ACE Study Population Data

ACE Score and HIV Risks



Life-Cycle Behavioral “Pitfalls”

of the 1st term Soldier

Behavioral “pitfalls” that can lead to dysfunction, potential suicide behaviors & premature attrition:

- Promiscuity & Impulsivity
- Premature marriage and Parenthood
- Family Violence
- Distrust/Disdain of authority figures; Loyalty issues
- Excessive debt/\$ problems
- Dysfunctional behaviors resulting in UCMJ
- Inability to form positive supportive relationships
- Substance abuse & other major psychiatric disorders
- Family of origin problems - acute & unresolved from past

ACEs & Suicide

One ACE →

2-5 times greater

Two ACEs

→ 30-50 times greater

- Only 1.1% of those with no ACEs attempted suicide
- Whereas, 35% of those with 7 or 8 ACEs attempted suicide

A Model for Understanding Dysfunctional Health-Risk Behaviors

Visible to Command
•—————
NOT Visible to Command

Behaviors: “Outcome” & Consequences
Stressors: “Triggers” for Dysfunctional Behavior
Current Environment: Work & Home Environments -supportive vs. non-supportive

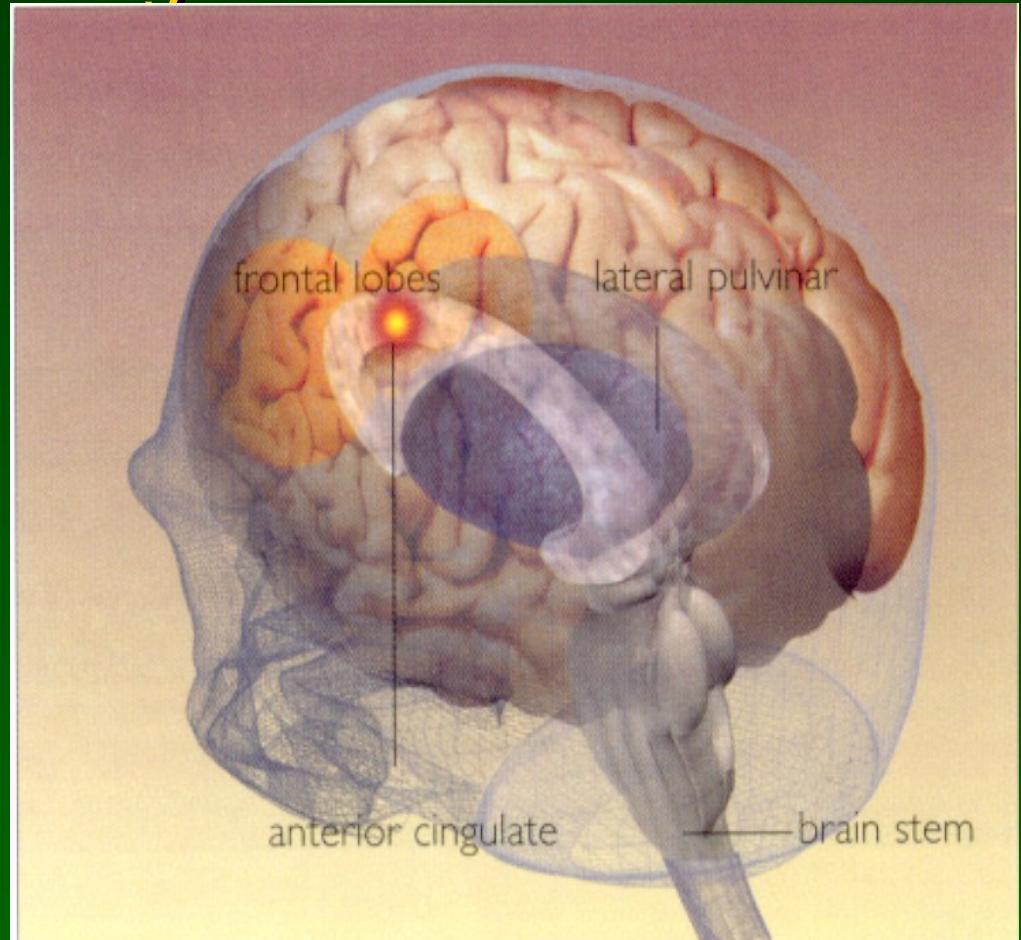
Developmental History: Consequences of Abuse, Trauma, ie. ACEs

Genetic Vulnerability to Psychiatric Illness:
“The best predictor of future behavior is past behavior.”

Psychiatric dz:
- Schizophrenia
- Mania
- Depression
- Substance Abuse

Brain growth, development and function are affected by:

- Genetics
- Vectors
- Toxins
- Physical Trauma
- Poor Attachment
- Emotional Trauma
- Neglect



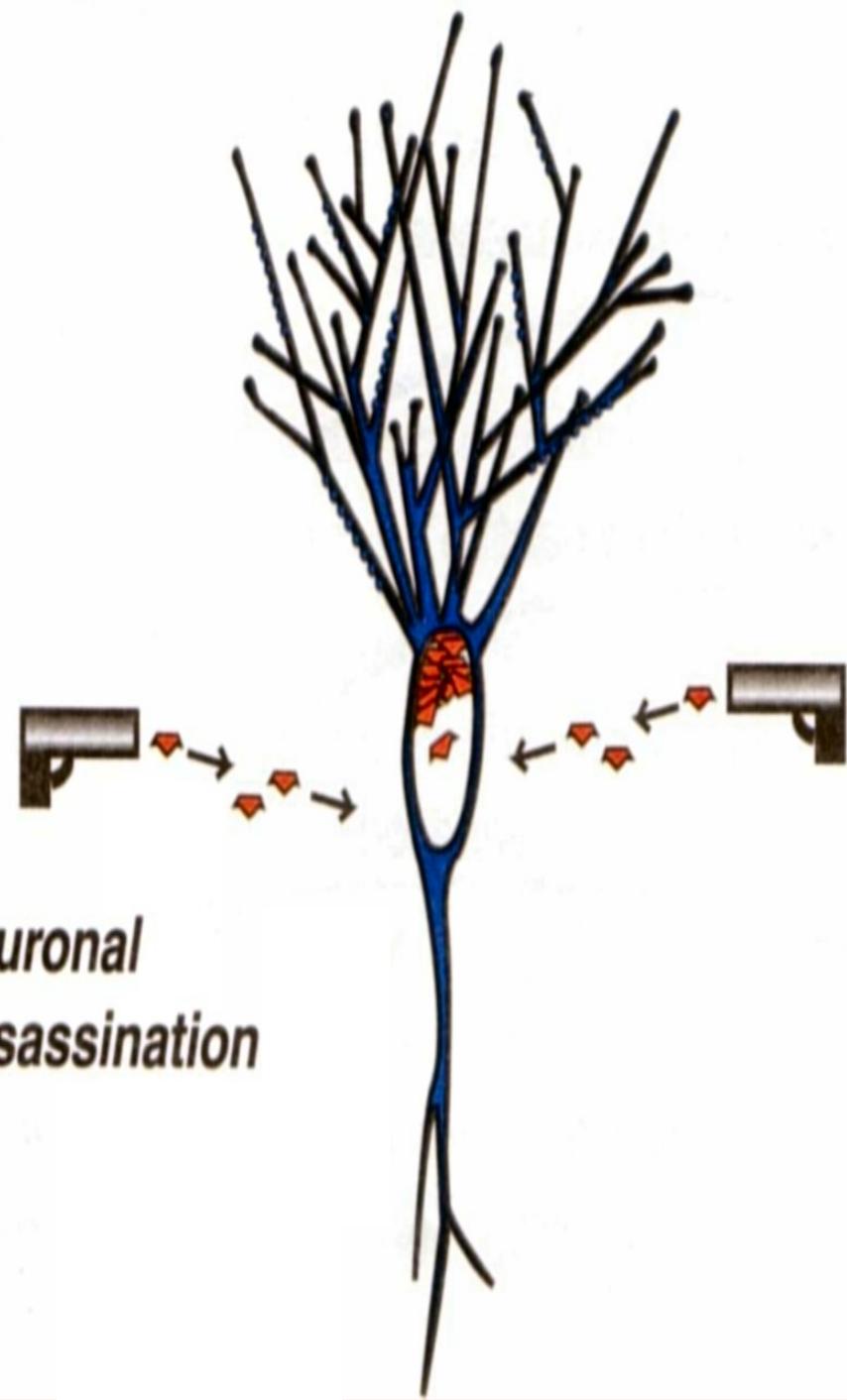
Hyper- arousal



Limbic Kindling

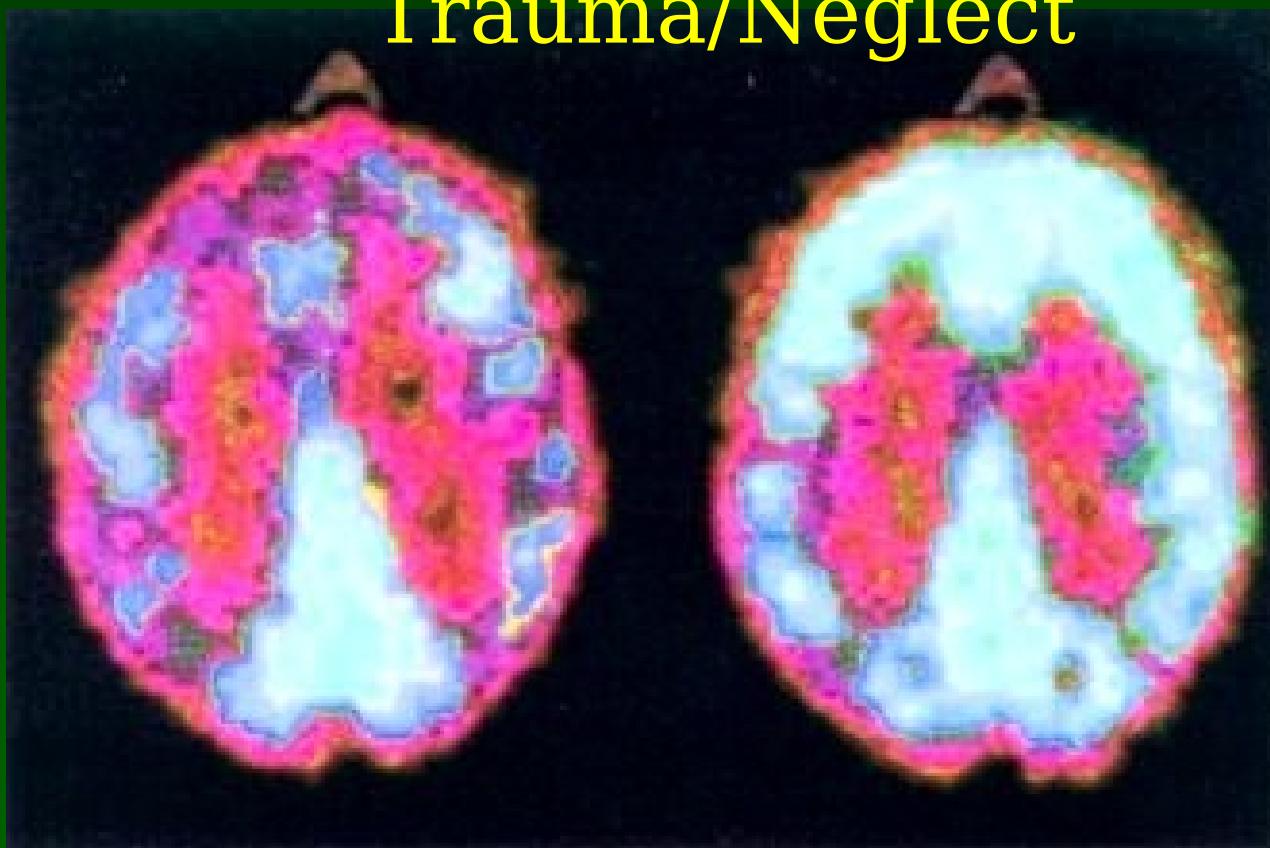


Death of Neurons



*neuronal
assassination*

Worst Case: No Precortical/Limbic Connections... Early & Persisting Severe Trauma/Neglect

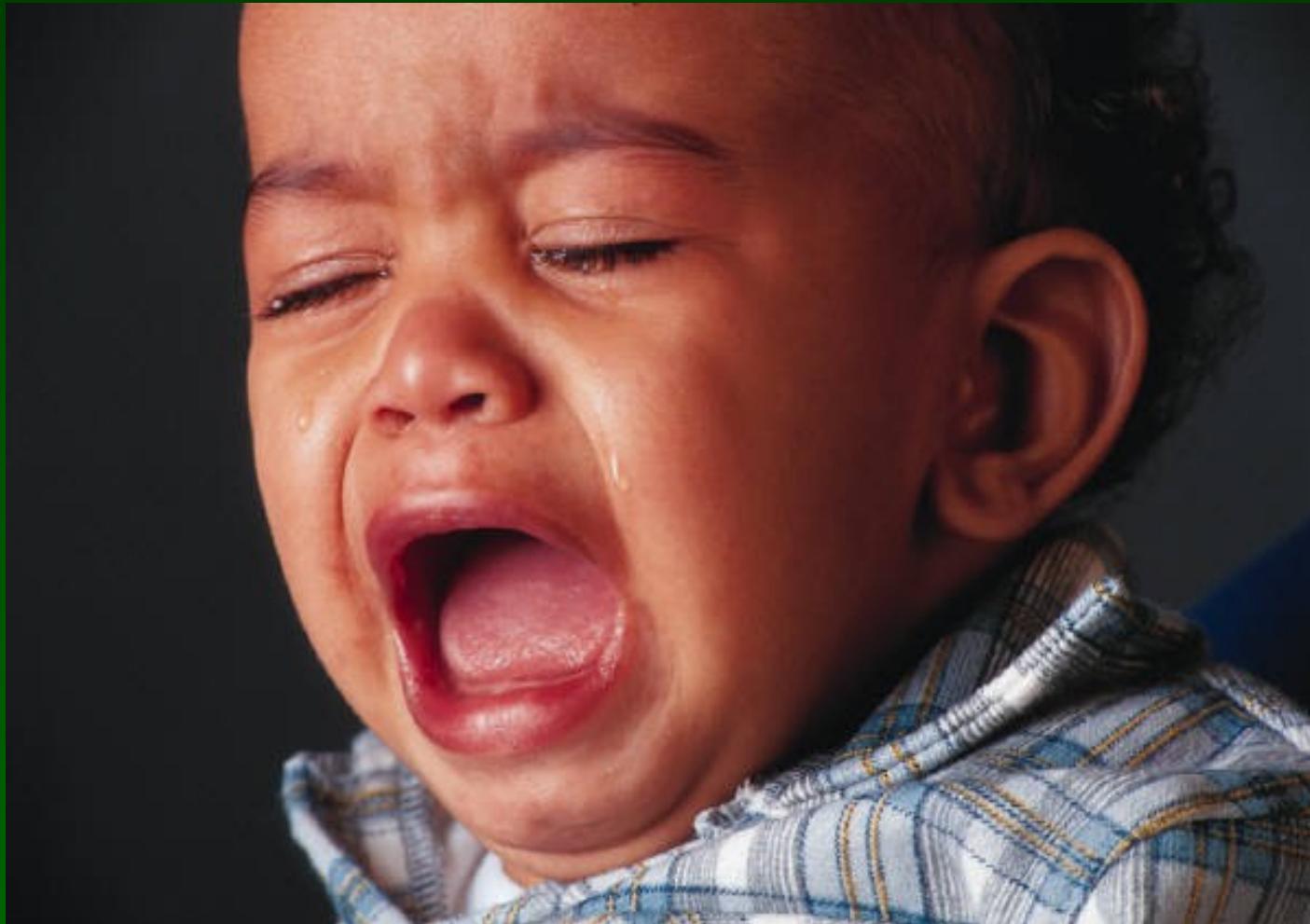


**Subject on right committed violent
murder**

ACE Trauma

- Trauma Results From:
 - Intense inappropriate negative affect (fear, anger)
 - Abrupt disruption to the dyadic connection
 - Failure to repair disrupted connection
 - Failure to soothe psychic pain
- The Most Damaging Trauma:
 - Occurs within the care-taking relationship
- Abuse/Neglect:
 - May be developmental-stage dependent...

**When the Tender Years
Have a Lot of This...**



Feelings Swing Wildly in Later Years



To this



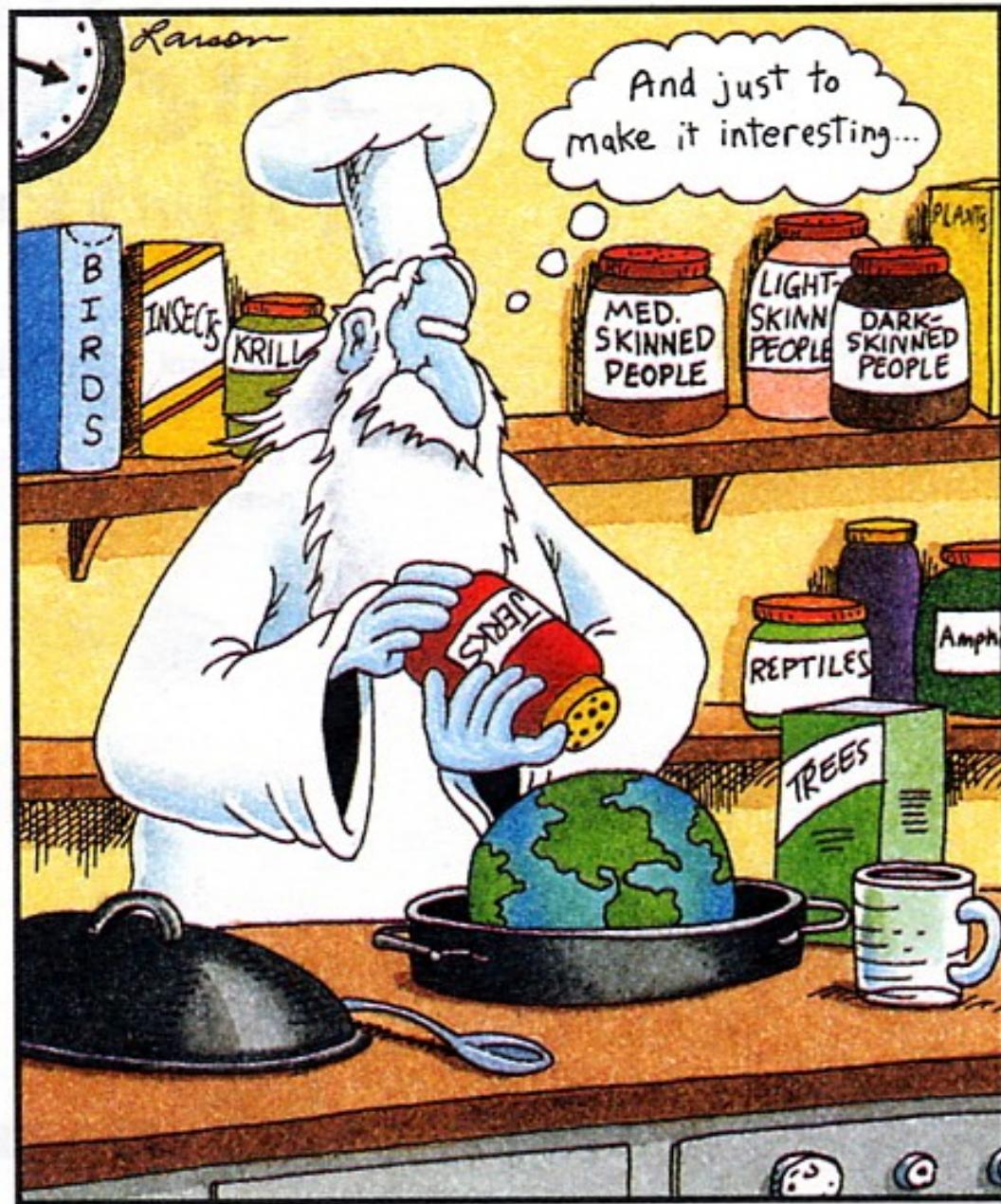
ACEs Lead To:

- Hyper-Arousal:
 - Fight/Flight; Vigilance ; Startle Response
 - Attention; Memory; Learning; emotional functioning; “emotional memory;” Hippocampal damage
- Disassociation:
 - Defeat response; “Learned Helplessness;”
 - Disengaging from the external world and attending to stimuli in internal world (avoidance, numbing, derealization, depersonalization)

Bottomline

- Trauma Impairs Emotional Understanding & Emotional Response
- Over time, these impairments become part of and skew personality.
- Personality Traits/Disorders are the end result of damage to areas of the brain that make emotional sense of the world.

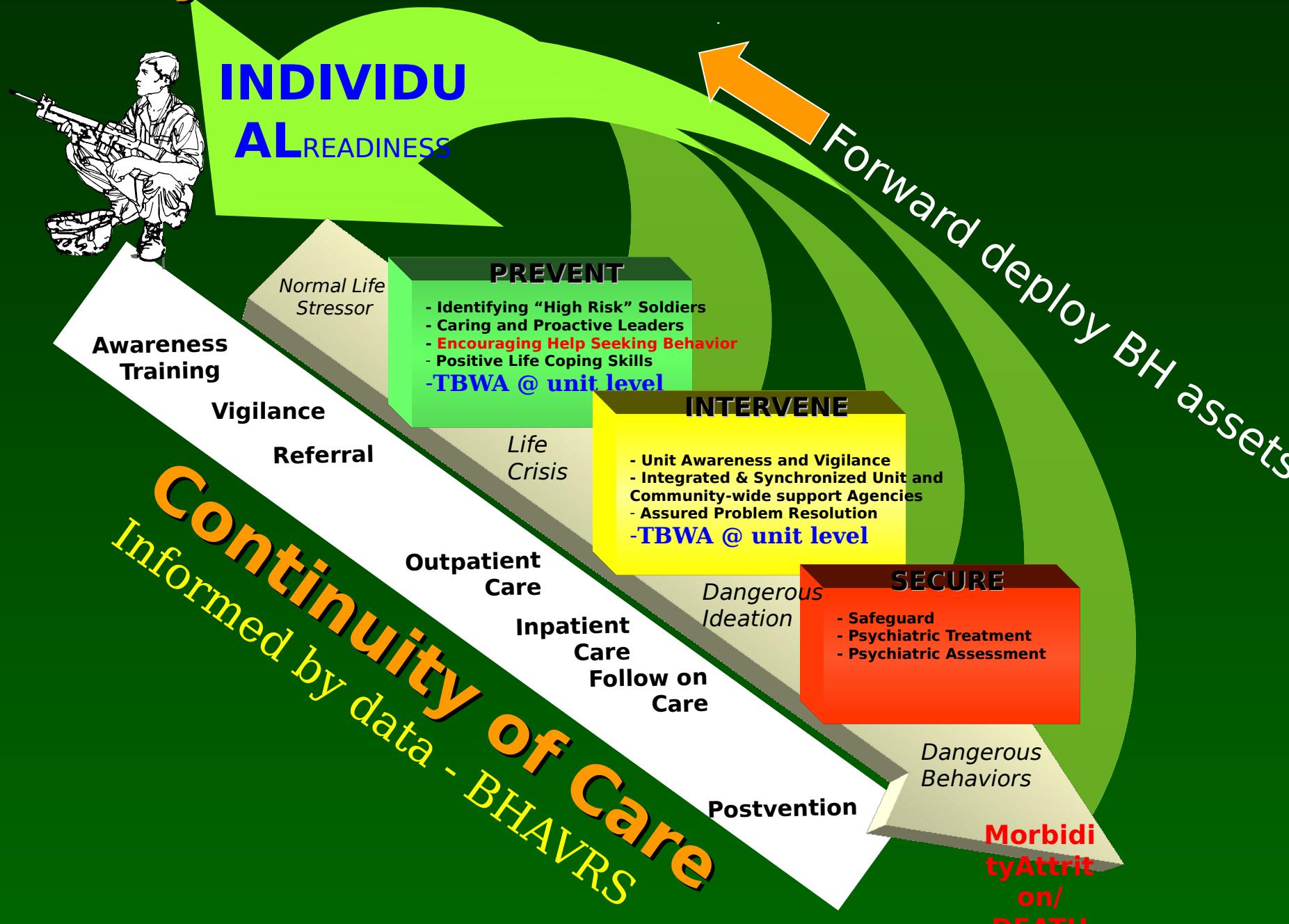
Gary Larson's Theory of Personality Disorders



The Good News!!!

- The brain keeps growing and changing
- Trauma induced brain damage can be prevented and/or repaired:
 - Healthy corrective relationships
 - Therapy/CBT
 - Medications

Army Behavioral Health Prevention M



EXPECTED OUTCOMES

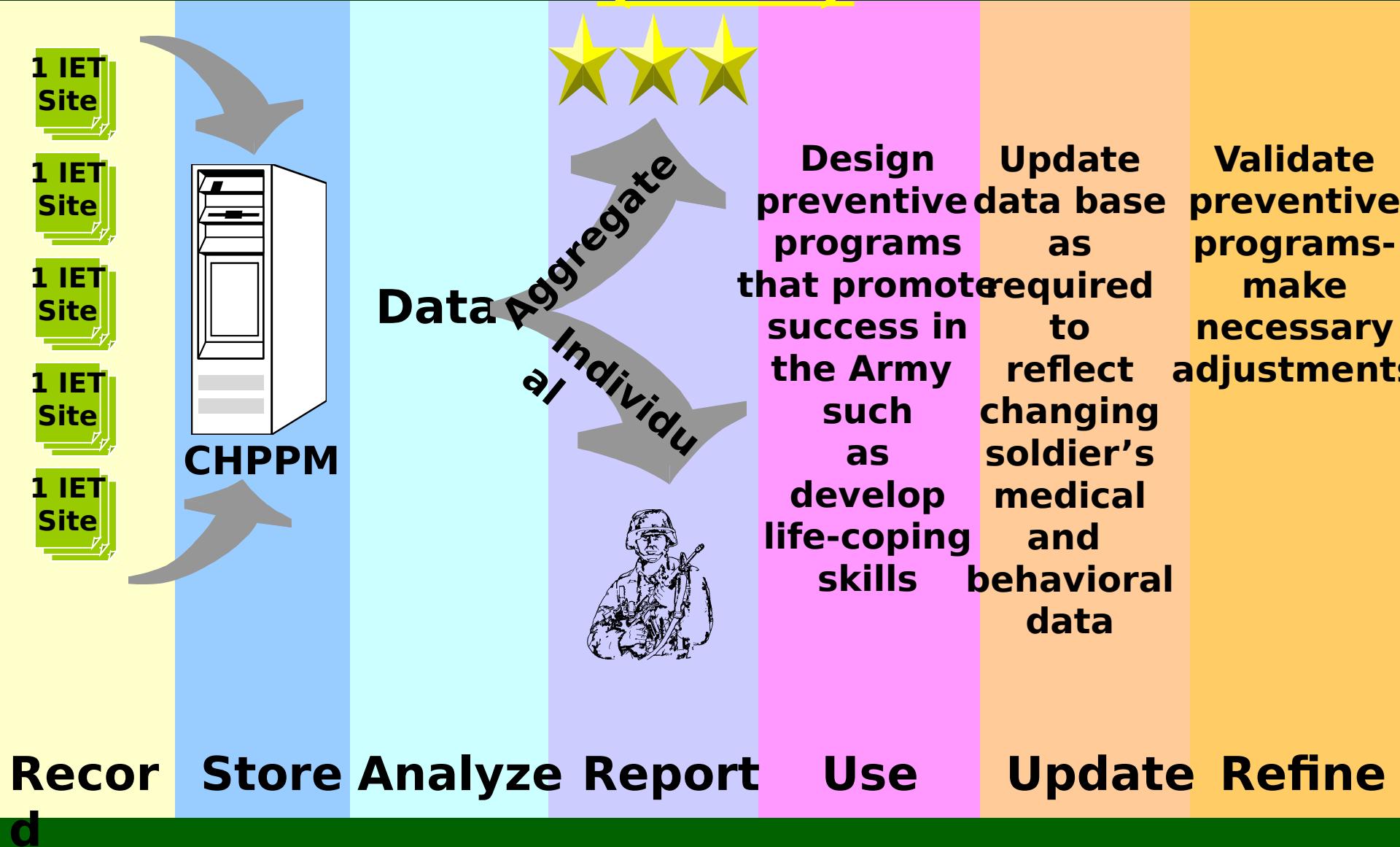
- Crisis behavior ↓
- AWOL ↓
- Sick Call ↓
- Training interruptions ↓
- CMH activity level ↓

- Treatment & return ↑
- Retention ↑

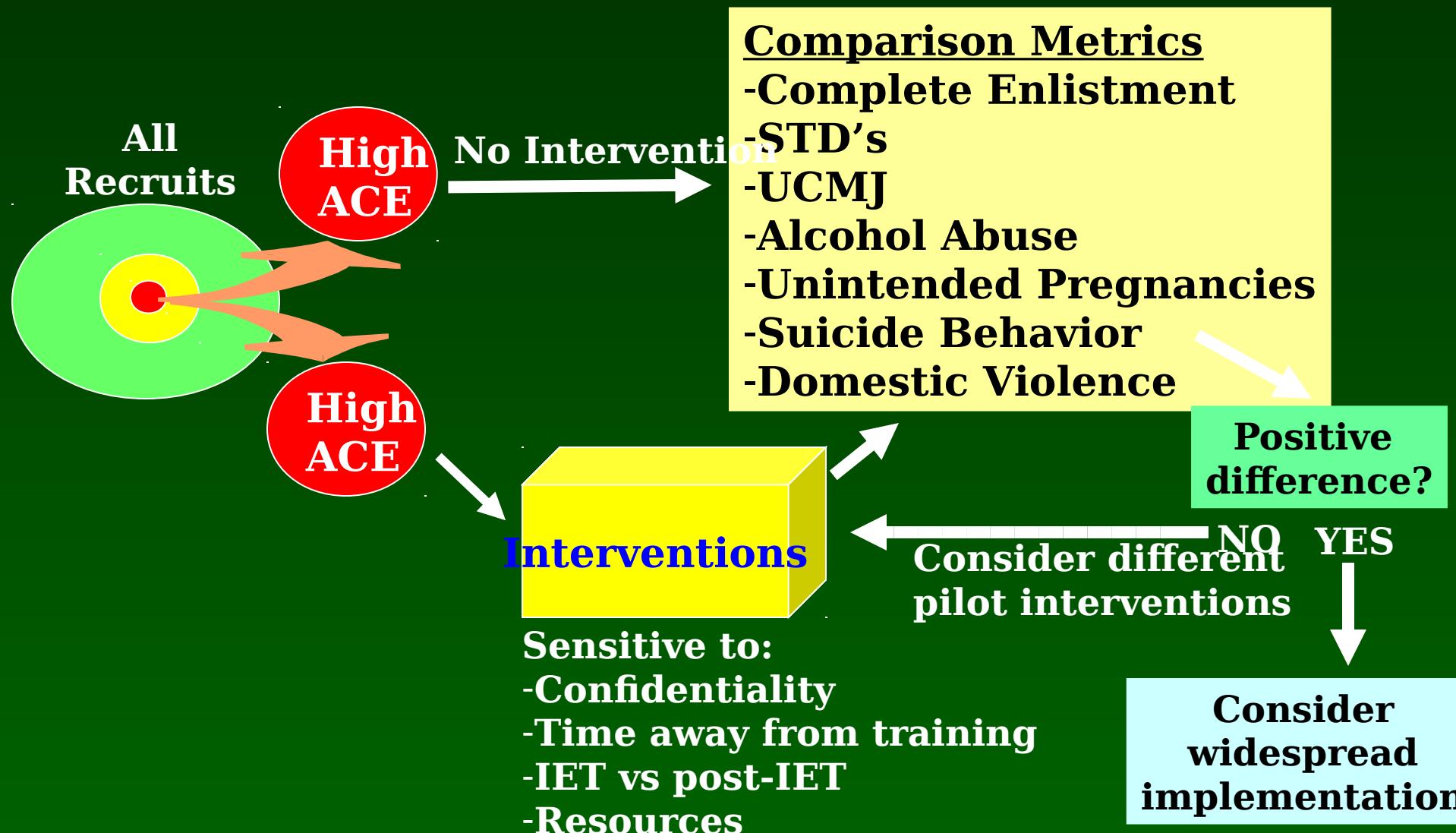
IET Resources for Living

- Proper Screening/Monitoring
- Healthy Corrective Relationships
- Life Skills Groups
- Mentorship Program
- Use combat stress control principles for prevention and

Recruit Assessment Program (RAP)



Potential Future Intervention Studies

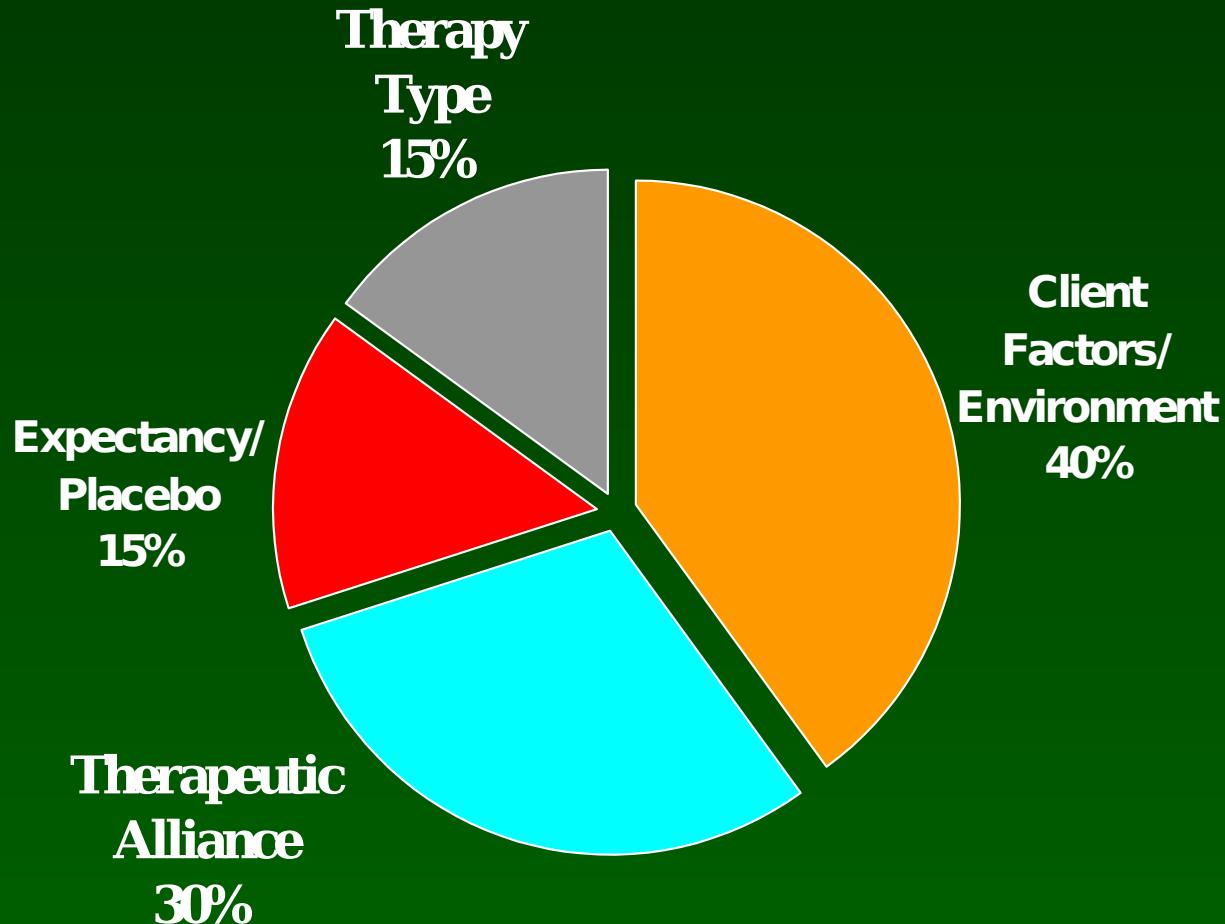


Embrace Connection

- Denial of interconnectedness
- Myth of individuality
- Discounting of relational objects, processes, and providers



What drives Change in Therapy:



“At its core, the therapeutic relationship remains an intensely human, personal, and essentially unique encounter”
(Bachelor & Horvath, 1999)



Life Skills in IET...



“You know, we’re just not reaching that guy.”

Life Skills Training

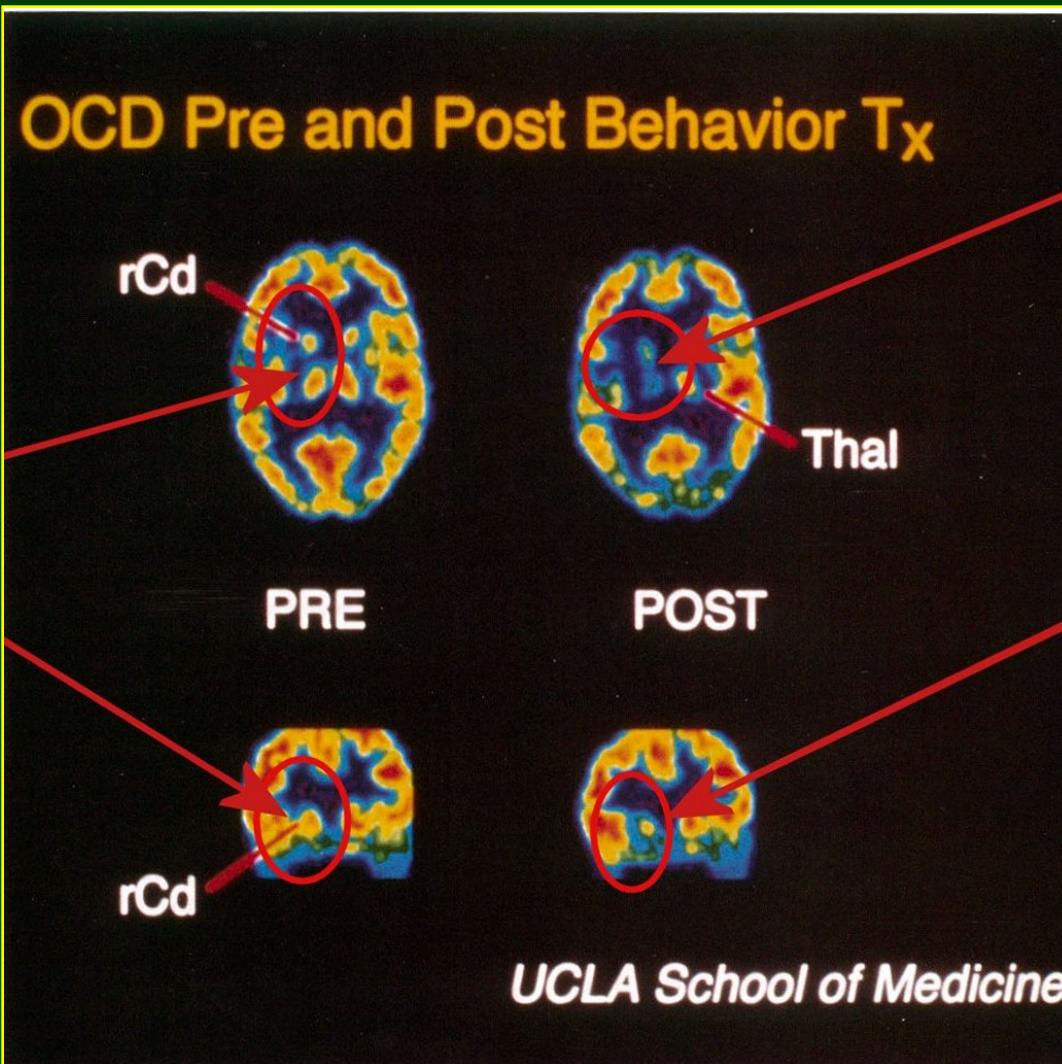
- Communication Skills
- Problem-Solving Skills
- Self-Mood Regulation
- Understanding Others
- Evaluating Life Expectations
- Financial Management
- Coping in Groups & Organizations

Life Skills and CBT

- CBT to 'teach' these concepts to soldiers
- Develop capacity to put self in context:
 - Accurately predict/anticipate stress and its impact
 - Understand and control maladaptive responses
 - Know and utilize available resources

CBT decreases Over Activity in the Right Caudate in OCD

Increased Activity



Decreased Activity

Mentorship Program

- Non-cadre NCOs and retirees (mentors)
- Mentoring in the Unit Area of Operations
- Provide guidance, connectedness, and affirmation
- Trained in ASIST, mentoring, and community resources

Use of Combat & Operational Stress Control (COSC) Principles

- Reduce Stigma (of them and us)
- PIES:
 - Proximity = Treat Far Forward
 - Immediacy = Treat ASAP
 - Expectancy = Expect Recovery / Instill Hope
 - Simplicity = KISS Principle

“Prevention Intervention”

Must be:

- Proactive - Come to them
- Attuned to stage of change
- Short term but sufficient (8-10 sessions)
- Applied as early as possible in lifecycle
- Non-stigmatizing
- Hopeful; encouraging; expectant
- Relationship-driven



Key Research Questions

- Can we reduce attrition in IET related to mental / behavioral problems through mental health (MH) interventions?
- Which interventions are most effective?
 - E.g.: CBT, Life skills training, mentoring, other modalities
- Can effective MH screening tools be developed?
 - Screening for selection (MEPS): SBIR AMSARA project
 - Screening for early intervention / prevention (IET / 1st duty station): RAP



Future WRAIR Plans

- Establish research effort:
 - Studies to better define factors that predict high attrition (e.g. RAP)
 - Intervention studies focused on reducing IET and 1st term attrition related to mental / behavioral health problems through programs that enhance soldier resiliency and ability to cope with stress.
- Timeline:
 - FY O3: Establish personnel and funding
 - FY O4: Write / obtain approval for protocol(s), Staffing of studies with TRADOC leadership
 - FY O5-O6: Initiate intervention protocols (e.g. CBT / life skills coping / mentoring programs in basic and AIT)
 - FY O7-O8: Refine / replicate studies and transition results to policy

QUESTIONS?

